

THAT WHICH IS CLAIMED:

1. An apparatus for attaching a cable to a structure, comprising:
an elongated rod having a varying cross-section in a longitudinal
direction;
an elongate sleeve mounted on said elongated rod in a first position to
facilitate insertion of a portion of said sleeve in a hole defined by the structure,
said sleeve capable of being axially translated along said elongated rod to a
second position to facilitate a positive engagement of the portion of said sleeve
within the hole; and
at least one attachment element carried by said sleeve, wherein said
attachment element is adapted to be attached to the cable.
2. The apparatus of Claim 1, wherein said at least one attachment element
comprises:
a ring defining an opening larger than said sleeve; and
a plurality of spokes extending inwardly from said ring to said sleeve.
3. The apparatus of Claim 1, wherein said elongated rod comprises:
a first portion of a first cross-sectional shape; and
a second portion of a second cross-sectional shape larger than the first
cross-sectional shape and disposed proximate to and displaced in the
longitudinal direction from said first portion.
4. The apparatus of Claim 3, wherein said first portion is a first
cylindrical portion and said second portion is a second cylindrical portion.
5. The apparatus of Claim 3, wherein said elongated rod comprises a
plurality of pairs of first and second portions.
6. The apparatus of Claim 5, wherein said elongated rod further
comprises a circumferential groove between the pairs of first and second
portions.

- 5 7. The apparatus of Claim 5, further comprising a plurality of said elongate sleeves mounted on said elongated rod, each sleeve associated with a respective pair of first and second portions such that said sleeve loosely surrounds the first portion and the second portion while in the first position and engages the second portion while in the second position, thereby radially expanding said sleeve.
- 10 8. The apparatus of Claim 1, wherein said elongate sleeve comprises:
 an expandable engagement member capable of radially expanding as said sleeve is moved from the first position to the second position; and
 a sleevelike member connected to said expandable engagement member for carrying said attachment element.
- 15 9. The apparatus of Claim 1, further comprising at least one tie member capable of attaching the cable to said attachment element.
- 20 10. An apparatus for attaching cables to a structure, comprising:
 an elongated rod having a lengthwise cross-section of varying shape;
 an elongate sleeve mounted on said elongated rod in a first position and capable of being axially translated along said elongated rod to a second position such that said sleeve expandedly engages within a hole defined by the structure; and
 a tie member capable of attaching the cable to said sleeve.
- 25 11. The apparatus of Claim 10, wherein said elongated rod comprises:
 a first portion of a first cross-sectional shape; and
 a second portion of a second cross-sectional shape larger than the first cross-sectional shape and disposed proximate to and displaced in the longitudinal direction from said first portion.
- 30 12. The apparatus of Claim 11, wherein said first portion is a first cylindrical portion and said second portion is a second cylindrical portion.

13. The apparatus of Claim 11, wherein said elongated rod comprises a plurality of pairs of first and second portions.

5 14. The apparatus of Claim 13, wherein said elongated rod further comprises a circumferential groove between the pairs of first and second portions.

10 15. The apparatus of Claim 13, further comprising a plurality of said elongate sleeves mounted on said elongated rod, each sleeve associated with a respective pair of first and second portions such that said sleeve loosely surrounds the first portion and second portion while in the first position and engages the second portion while in the second position, thereby radially expanding said sleeve.

15 16. The apparatus of Claim 10, wherein said elongate sleeve comprises:
an expandable engagement member capable of radially expanding as
said sleeve is moved from the first position to the second position; and
a sleevelike member connected to said expandable engagement
20 member for carrying said tie member.

17. A method for attaching a cable to a structure, comprising:
providing an elongated rod having a varying cross-section in a
longitudinal direction and an elongate sleeve capable of being axially
translated along the elongated rod;
inserting a portion of the sleeve into a hole defined by the structure;
translating the sleeve axially along the elongated rod to facilitate
positive engagement of the sleeve within the hole; and
attaching at least one cable to the sleeve.

18. The method of claim 17, further comprising mounting the sleeve upon the elongated rod in a first position prior to inserting the portion of the sleeve into the hole defined by the structure.

19. The method of Claim 17, wherein translating the sleeve axially along the elongated rod comprises expanding the portion of the sleeve within the hole.

20. The method of Claim 17, wherein attaching at least one cable to the sleeve comprises encircling at least one cable and an attachment element carried by the sleeve with a tie member.

21. An apparatus for attaching a cable to a structure, comprising
a pin having a first portion with a first cross-sectional shape and a second portion with a second cross-sectional shape that is larger than the first cross-sectional shape;
an expandable engagement member mounted on said pin in a first position and capable of radially expanding as said engagement member is axially translated along said pin from the first position to a second position to facilitate engagement with a hole defined by the structure; and
a clamp element defining an opening at each distal end through which said engagement member extends, said clamp element also defining an aperture of a predetermined size capable of receiving a cable of a corresponding size.

22. The apparatus of Claim 21, wherein the first portion of said pin comprises a first cylindrical portion having a first diameter, and wherein the second portion of said pin comprises a second cylindrical portion at the distal end of said pin having a second diameter larger than the first diameter.

23. The apparatus of Claim 21, wherein said clamp element has a P-shaped cross-section when the distal ends of said clamp element meet.